Observations of the Periodical Comets of Tempel and Brorsen. By George Bishop, Esq.

I beg to communicate to the Society the following positions of the periodical comet of *Tempel* (discovered July 3) and of *Brorsen's* comet of short period, obtained in this observatory. The observations have been chiefly made by Mr. Plummer. Three by Mr. Hind are distinguished by H.

Tempel's Comet.

	Twickenham Mean Time. h m s	Apparent R.A. h m s	Apparent Decl. ° ′ ″	Observer.
July 31	13 24 33	1 18 44·46	−7 54 4·3	P
Aug. 2	13 2 58	1 22 31 59	8 15 17·1	H
„ 6	14 21 22	1 29 36·92	9 3 11·6	H
Sept. 17	13 52 22	1 49 47·13	−18 21 11·5	P
„ 20	13 51 57	* — 53·14	*— 3 28·3	„
„ 21	14 5 0	* — 46·46	*—10 25·8	„
„ 26	13 41 7	1 43 13·29	−19 37 20·5	„
Oct. 20	11 35 17	1 22 10·1	19 55 41	„
„ 20	11 39 49	1 22 11·4	−19 55 59	H

The stars with which the comet was compared on the nights of the 20th and 21st September are not found in any catalogue, and on the 20th October, owing to the extreme faintness of the comet, the observers placed no reliance on their observations. For this night the position is given approximately.

Brorsen's Comet.

	Twickenham Mean Time. h m s	Apparent R.A. h m s	Apparent Decl. ° ′ ″
Sept. 17	15 45 39	8 50 7·44	+ 3 23 45·6
„ 21	16 8 5	9 17 24·24	4 36 40·1
Oct. 8	16 32 26	11 13 2·66	7 37 17·7
„ 15	18 9 25	11 59 19·11	7 21 0·4
„ 26	17 16 18	13 2 22.09	+ 5 30 26·8

Oct. 8. The comet observed through fog.

„ 15. The observation rendered doubtful owing to fog and the near approach of daylight.

Oct. 26. The comet's diameter estimated at $1\frac{1}{4}$ minutes. The comet round, with considerable condensation towards the centre.

The Observatory, Twickenham,
    1873, *Nov.* 12.

Parabolic Elements of the Comets of Henry (Paris) and Borrelly (Marseilles). By Mr. W. E. Plummer.

(Communicated by George Bishop, Esq.)

The following elements of Comet IV. 1873, discovered at Paris by Paul Henry on August 23, are computed from obser-

vations made at Washington on August 25 and September 2, and at Twickenham on September 12. Corrections for parallax and aberration have been applied, computed from the orbit of Mr. Ormond Stone.

Perihelion Passage.　Oct. 1·76295　　G.M.T.

$$
\begin{array}{lll}
& & ° \quad ' \quad '' \\
\pi & \ldots & 302 \ 58 \ 51\text{·}0 \\
\Omega & \ldots & 176 \ 43 \ 35\text{·}4 \\
i & \ldots & 58 \ 30 \ 40\text{·}1
\end{array} \Bigg\} \ \text{M. Eq. Sept. 0.}
$$

Log. q ... 9·5852771

Motion Retrograde.

A comparison with the middle place shows the following errors in the sense, calculation-observation.

Longitude　$- 1\overset{''}{\cdot}8.$　　Latitude　$- 1\overset{''}{\cdot}6.$

The orbit of Comet III. 1873, discovered by M. Borrelly, is computed from observations made at Marseilles on August 23, at Königsberg on September 2, and at Twickenham on September 17, corrected for parallax and aberration deduced from elements computed by myself, but embracing a shorter interval, and to which the following are preferable.

Perihelion Passage.　Sept. 10·73619　　G.M.T.

$$
\begin{array}{lll}
& & ° \quad ' \quad '' \\
\pi & \ldots & 36 \ 57 \ 3\text{·}7 \\
\Omega & \ldots & 230 \ 38 \ 37\text{·}2 \\
i & \ldots & 84 \ 3 \ 20\text{·}1
\end{array} \Bigg\} \ \text{M. Eq. Sept. 0.}
$$

Log. q ... 9·9002537

Motion Retrograde.

The errors for the middle observation are—

$$
\begin{array}{lll}
C-O & \delta \lambda \cos \beta & - 15\overset{''}{\cdot}8 \\
& \delta \beta & - 6\text{·}2
\end{array}
$$

Mr. Bishop's Observatory, Twickenham,
　1873, November 12.